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ABSTRACT

It is the author's contention that it is possible for a teacher with a thorough preparation in the content and process of science, and teaching one of the newer science programs, to have little effect on his class. This may be due to the teacher's lack of understanding of the world of children, of their capacities and capabilities. One way for a prospective teacher to learn and understand a child's view of the world is to have conversations with children. The author has therefore designed a field experience program built around individual interviews with children. Students first read Piaget's "The Child's Conception of the World." They learn why interviews are used, how to ask questions, and what they can find out from the discussions. The prospective teachers who participated in this program have begun to develop an understanding of the world of children and skills needed to continue to increase their understanding. (BR)

INCREASING TEACHER AWARENESS OF CHILDREN'S PERCEPTIONS

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Michael R. Cohen

Studies of the cognitive abilities of children, as described by the previous speakers, are possibly the most critical aspect of curriculum development. As we increase our understanding of how children learn and how the curricular activities are perceived and conceptualized by children, we will be in a better position to develop relevant curriculum. Unfortunately, even the most meaningful curriculum can become irrelevant in the hands of a thoughtless teacher. I would ask, "How do we get teachers to use new and innovative curricular materials? How can we make teachers realize that children can accomplish activities and udnerstand concepts that teachers find impossible?"

A good part of the problem stems from the fact that children are often allowed to learn only as much as their teacher. The teacher feels that if she doesn't understand the concept, "How could the child?" In science education we have stressed content and process and turned out what we considered to be competent teachers. This might reduce a teacher's fear of the particular subject matter. However, content and process is approached from an adult point of view. It is therefore possible that a teacher with a thorough preparation in the content and process of science, and teaching one of the newer science programs, can have little effect on her class.

Many people see on-the-job experiences, internships and field experiences as an answer to the need for compassionate teachers. (Wanat

and Cohen, 1969) However, there are many limitations inherent in practical experiences in the schools. How can our students learn to be innovative if we send them to schools which reinforce the traditional teaching they received as children? What is the use of adapting to an essentially outdated system? (Howsam and Purpel, 1968) First hand experiences must do more than just place a perspective teacher in a school.

It is evident, from my own experience and that of others, that adults can learn and understand a child's view of the world through conversations with children. (M. Cohen, 1968; Smart, 1968) A field experience program for perspective teachers was therefore built around individual interviews with children. Piaget feels this type of investigation, questioning children in a one-to-one situation, will help teachers realize how hard it is to understand what children mean and how hard it is to make oneself understood by children. (Duckworth, 1964) The awareness of this communication problem should not be considered discouraging. Rather, it provides an opportunity to see the problems children face in an adult oriented world, and challenges one to develop a better understanding of children's capacities and capabilities.

I would like to describe some results of an attempt to have teachers develop the skills needed to understand the world of children. Similar programs have been used by others (D. Cohen, 1968; Dowley, 1969; Long, 1969; Morine, Formanek, and Greenberg, 1961; Sharefkin, 1969; Smart, 1968.) to help teachers listen to children and learn that children view the world differently from adults.

Let me provide some anecdotes to give you a feeling for the experiences of the perspective teachers.

Pam presented some nickels, dimes and quarters to a child in a head start class, and asked him to separate them into piles of like coins. The child put the nickels in one pile, but placed the dimes and quarters together in another pile. Pam was surprised, but asked the child to explain his answer. The child said, "The nickels are smooth around the edge but the dimes and quarters are rough." (Blackman, 1969)

Elaine also tried some classifying activities with the head start classes. Most children had trouble classifying different sized circles in groups of small, medium and large. One child however, arranged them into three groups with a small, medium and large circle in each group. When asked why the child said it was a "mommy, daddy and baby." (Edwards, 1969)

These two anecdotes are not examples of typical cognitive research. They are the work of amateurs who are just beginning to learn to understand children. It is true that they could read case studies and study developmental psychology to learn about children. But in the formal study I find they do not relate their knowledge to the real world. The following examples as well as two just given were the results of one school term's work. From the range of experiences it is possible to see that I could not have improved on the choice of topics if they were planned.

A side effect that should not be overlooked, and might prove to be most important, has to do with the area of race relations. These were of the first experiences some of our white students had with black children. It was also the first experiences our black students and white students had with children from poor homes. It was interesting

that most students were surprised at the ability of the children. They began to wonder why some of their friends found similar children In grade school so dull and dumb. Here are some anecdotes.

Judy said she realized how little she understood black children when a head start child became hysterical at the sight of a policeman's picture. (Meize, 1969)

Sue found it interesting that the children described the policeman as a negative enforcer, don't run, don't steal, don't speed, but still insisted "He is our friend.." (Stoughton, 1969)

Helen, found that she had to ask why or she could come to the wrong conclusion. Helen, "What color is soft?" Child, "Brown." Helen, "Why do you say brown?" Child "Cause my teddy is brown, and he is soft!"

Phyllis had a similar experience. On her first visit she noticed two children called John and Duane wearing dresses. She was thoroughly confused when they played with the other boys in the class. She thought to herself, and concluded that it must be a black cultural trait for boys to wear dresses. She said, "I was silently very embarrassed when I remembered that it was the day of their Halloween party." (Dodd, 1969)

I am going through these stories fairly quickly. I assume you can see the implications of each of these stories for further discussion. However, I want you to get the flavor of the kinds of things my students find out.

Before they began their projects my students studied Piaget's The Child's Conception of the World. They learned why interviews are used, how to ask the questions, and what they can find out from the discussions. They also found out the inadequacy in their work. If it takes a year of daily practice to pass beyond the fumbling stage of a beginner in

Interviewing children, (Piaget, 1960) what will the quality of the work be after four weeks of practice?

Here are some additional anecdotes covering a wide range of topics.

Leah asked Tracy if she had seen the sun this morning, and she said she had. Leah asked her where the sun was and Tracy replied, "It was in my eyes before Mrs. Hearn closed the curtain." (Fiscus, 1969)

Phy.'is was working with a boy naming the parts of his arm. She held up her fingers and he said "fingers" she said "How many fingers are up?" He said "Five," then Phyllis held up her fist, the child debated a minute and said "Five Fingers down." (Dodd, 1969)

Pam was playing a game with first graders which required them to raise their right hand for some answers and their left for others. Most children could not do this. One boy was asked to raise his right hand, but repeatedly raised both. When asked why he said, "Idon't know my left from my right, so if I raise both hands I know I'll get the right one." (Merritt, 1969)

Shirley told a child not to use the word ain't, because it wasn't proper English. The right word was isn't. The child turned to Shirley and asked "What is English?"

Watching this same child in a class Shirley heard her tell the teacher that snow comes from heaven. When the teacher asked why did she think it came from heaven the child replied, "Because I saw it. I looked up in the sky and saw it falling." (Patterson, 1969)

A child told Sharon and the teacher that her mother was going to have a baby girl. The teacher asked her how she knew it was going to be a girl and the child repolied, it had to be, because the last time her mother had a boy. There were three children in the family and every other one was a girl. (Coston, 1969)

Guna was helping a child work a jig saw puzzle. One puzzle had a king, queen and a castle. The child could identify the King but not the other figures. Guna gave the child a hint by saying that one was a lady and the other was a man. The child knew right away that the other figure was a lady King. However, she still had trouble with the castle. Guna said that the king and queen live there and expected the child to say it was a castle. The child quite naturally said, "House." (Vinters, 1969)

Rosalee worked with children trying to find out what objects would float or sink. One boy said that dark objects sink cause they are heavy, and light colored objects float because they are not heavy. However, all color bottoms sink. Why? Well they have holes in them. How does this make them sink? Well, if a boat has holes in it it will sink! (Arnett, 1969)

How do these stories relate to the discussion of cognitive studies? Aren't they just repeats of other stories we have heard for years? I admit that similar stories have been going around for years. But, have you ever noticed how each time you hear a humorous story about children your reaction is one of amazement. "Hay, isn't the kid funny. How did he ever dream up that answer?" The astonishment most adults show towards children's "smart" answers is, unfortuantely, a sad commentary on the adult world: We really don't know children.

The prospective teachers who participated in this program have begun to develop an understanding of the world of children and the skills to continue to increase their understanding.

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